

EC-TYPE EXAMINATION CERTIFICATE



[1]

[2]

Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

[3]

EC-Type Examination Certificate Number: **DEMKO 13 ATEX 1112940X Rev. 1**

[4]

Equipment or Protective System: **Intrinsically Safe Flashlight**

[5]

Manufacturer: **Daysun Technology Ltd.**

[6]

Address: **1st Floor, No. 1, Alley 2, Ln. 110, Sec. 4, Hsimen Rd., Tainan 704, Taiwan**

[7]

This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. **4786430719**

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2009

EN 60079-11:2012

EN 60079-26:2007

[10]

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11]

This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12]

The marking of the equipment or protective system shall include the following:

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Certification Manager
Jan-Erik Storgaard

This is to certify that the sample(s) of the Equipment described herein ("Certified Equipment") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Equipment Certification Program Requirements. This certificate and test results obtained apply only to the equipment sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured equipment. UL has not established Follow-Up Service or other surveillance of the equipment. The Manufacturer is solely and fully responsible for conformity of all equipment to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2013-06-27

Re-issued: 2014-06-30



Notified Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

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Schedule

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Description of Equipment or protective system

The Models DF104-2W, SF-12 and SF-13 are portable, hand-held LED flashlights powered by three, size 'C', 1.5V, alkaline batteries connected in series. The following batteries were considered acceptable for use in the flashlights:

- Model E93, manufactured by Energizer
- Model MN1400, manufactured by Duracell
- Model 814, manufactured by Rayovac
- Model 04914, manufactured by Varta

Temperature range

The ambient temperature range is -20 °C to +40 °C.

Performance Testing

The optical radiation output of the apparatus with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 94/9/EC is not covered in this certificate.

Routine tests

None.

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Report No.

Project Report No.: 4786430719 (Hazardous Location Testing)

Documents:

Description:	Drawing No.:	Rev. Level:	Date:
All Models Overview	EX02. DF104-2W Combination	3.0	2012-09-12
Model DF104-2W: Label	M10. DF104-2W Marking	3.0	2014-06-26
Model DF104-2W: Label	M10. DF104-2W Marking EU	3.0	2014-06-26
Model SF-12: Label	M10. SF-12 Marking	3.0	2014-06-26
Model SF-12: Label	M10. SF-12 Marking EU	3.0	2014-06-26
Model SF-13: Label	M10. SF-13 Marking	3.0	2014-06-26
Model SF-13: Label	M10. SF-13 Marking EU	3.0	2014-06-26
Model DF104-2W: Manual	U01. DF104-2W User Manual	2.1	-
Model SF-12: Manual	U01. SF-12 User Manual	2.1	-
Model SF-13: Manual	U01. SF-13 User Manual	2.1	-
Model DF104-2W: Exploded	EX01. DF104-2W Explosion	5.0	2013-06-04
Model SF-12: Exploded	EX01. SF-12 Explosion	5.0	2013-06-04
Model SF-13: Exploded	EX01. SF-13 Explosion	5.0	2013-06-04
Model DF104-2W: Mechanical BOM	B01. DF104-2W ME-BOM	6.0	2014-04-03
Model SF-12: Mechanical BOM	B01. SF-12 ME-BOM	6.0	2014-04-03
Model SF-13: Mechanical BOM	B01. SF-13 ME-BOM	6.0	2014-04-03
Model DF104-2W: Body	M06. DF104-2W Body	5.0	2013-06-04
Model SF-12: Body	M06. SF-12 Body	5.0	2013-06-04
Model SF-13: Body	M06. SF-13 Body	5.0	2013-06-04
Head Lens	M07. DF104-2W Head Lens	3.0	2012-09-12
Model DF104-2W: Head Rubber	M08. DF104-2W Head Rubber	3.0	2012-09-12
Model SF-12: Head Rubber	M08. SF-12 Head Rubber	3.0	2012-09-12
Model SF-13: Head Rubber	M08. SF-13 Head Rubber	3.1	2012-12-27
Model DF104-2W: Cross Section	M09. DF104-2W Cross Section	1.0	2012-10-09
Model SF-12: Cross Section	M09. SF-12 Cross Section	1.0	2012-10-09
Model SF-13: Cross Section	M09. SF-13 Cross Section	1.0	2012-10-09
Valve	M15. DF104-2W Valve	2.0	2013-06-04
O-ring	M11. DF104-2W O-Ring	1.0	2012-12-26
Insulating Partition	M03. DF104-2W Insulating Partition	3.0	2012-08-24
Wire	M14. DF104-2W Wire	2.0	2014-04-03
Infallible Wire Connection	E05. DF104-2W PCB Connection	1.0	2013-01-28
Lamp Assembly	M02. DF104-2W Lamp Assembly	3.0	2012-08-24
PCBA Bracket	M12. DF104-2W PCBA Bracket	1.0	2012-12-26
Schematic	E01. DF104-2W Schematics	4.0	2013-01-09
Electrical Bill of Material	B02. DF104-2W EE-BOM	6.0	2014-04-03
LED Circuit Board Layout	E02. DF104-2W LED PCB	4.0	2014-04-08
REG Circuit Board Layout	E04. DF104-2W REG PCB	4.1	2013-01-16
Key Circuit Board Layout	E03. DF104-2W Key PCB	3.2	2013-01-16



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Special conditions for safe use:

- Read manual before use.
- Do not open the enclosure in a hazardous area.
- Replace batteries only in non-hazardous areas.
- Use only battery type Energizer E93, Duracell MN 1400, Rayovac 814 or Varta 04914.
- Do not mix batteries from different manufacturers.
- Do not mix used batteries with new batteries.
- The screw shall be secured tightly after opening and closing the enclosure.

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Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Annex III of ATEX directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Additional information

The Models DF104-2W, SF-12 and SF-13 have in addition passed the tests for Ingress Protection to IP 6X in accordance with EN60529: 1991/A1 2001.

The Registered Trademark,  **DAYSUN**,
 **DAYSUN** or
 **DAYSUN TECHNOLOGY LTD.**, for Daysun Technology Ltd. may
be used as the company identifier on the marking label.

This certificate was issued as "Accredited by DANAK under registration number 7011 to certification of products".

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

